

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.:	US 7,331,600 B2	)	
		)	
Issued:	February 19, 2008	)	<i>Confirmation No. 8015</i>
		)	
Patentees:		)	
Inventor:	Yasuhito MIYATA	)	
Assignee:	Takata Corporation	)	
		)	
For:	AIRBAG APPARATUS, MOTORCYCLE WITH AIRBAG APPARATUS, AND METHOD OF MANUFACTURING AIRBAG APPARATUS	)	
		)	
		)	
Application No.:	10/601,927	)	
		)	
Filed:	June 23, 2003	)	
		)	
		)	
Attorney Docket:	7613/78731	)	
		)	
Customer No.:	22242	)	

This Request For Certificate Of Correction  
Of Patent was electronically filed on  
August 14, 2008 using EFS-Web.

Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

ATTENTION: Certificate of Corrections Branch

**REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT  
FOR APPLICANT'S MISTAKE (37 C.F.R. § 1.323) AND  
FOR PTO MISTAKE (37 C.F.R. § 1.322(a))**

Sir:

In accordance with 37 C.F.R. § 1.322, the above-specified Patentees, through their attorneys, respectfully request that a Certificate of Correction be issued for the above-captioned patent to correct the following errors.

Patent US 7,331,600 B2

Issued February 19, 2008

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT dated August 14, 2008

The exact page and line number where the errors occurred in the application file are as follows:

TITLE PAGE:

(56) References Cited, U.S. Patent Documents, for 2004/0150197 A1, delete "Ijima" and insert --Iijima-- therefor (from Office Action of December 29, 2004, PTO-892 Notice of References Cited, Document K).

(56) References Cited, Foreign Patent Documents, for JP 2001219885, delete "8/2004" and insert --8/2001-- therefor (from Office Action of December 29, 2004, PTO/SB/08a Information Disclosure Statement by Applicant, Japanese reference cited by Applicant and considered by Examiner).

IN THE CLAIMS:

Column 10, line 23, after "comprising" insert -- : -- (from Amendment dated December 27, 2006, page 5 of 15, claim 13, line 2).

Column 10, line 25, after "wheel" insert -- ; -- (from Amendment dated December 27, 2006, page 5 of 15, claim 13, line 4).

Column 10, line 26, after "retainer" insert -- ; -- (from Amendment dated April 7, 2005, page 5 of 11, claim 13, line 4).

Column 10, line 47, after "direction" insert -- , -- (from Amendment dated December 27, 2006, page 5 of 15, claim 13, line 21).

Column 10, line 54, after "the" insert --retainer such that-- (from Amendment dated July 19, 2006, pages 5 of 13 and 6 of 13, claim 13, line 23).

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REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT dated August 14, 2008

REMARKS

The above-requested changes result from errors which occurred during printing of Patent US 7,331,600 B2, four of which are attributable to the United States Patent and Trademark Office ("USPTO"), and three of which are errors made on the part of Applicant. It is believed that Applicant's errors are of a minor character and that such mistakes occurred in good faith. Accordingly, the errors do not involve such changes in the patent as would constitute new matter or would materially affect the scope or meaning of the patent, nor require reexamination, and issuance of a Certificate of Correction is respectfully requested.

A Certificate of Correction form, PTO/SB/44 (also referred to as PTO 1050), incorporating the requested changes is enclosed herewith.

In accordance with procedures set forth in the notice entitled "Expedited Issuance of Certificates of Correction When the Error is Attributable to the United States Patent and Trademark Office," Patentees submit herewith a copies of the Office Action dated December 29, 2004, and Amendments dated April 7, 2005, July 19, 2006, and December 27, 2006, as supporting documentation.

Please send the Certificate to:

Stephen S. Favakeh, Esq.  
FITCH, EVEN, TABIN & FLANNERY  
120 South LaSalle Street, Suite 1600  
Chicago, Illinois 60603-3406

Patent US 7,331,600 B2

Issued February 19, 2008

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT dated August 14, 2008

Pursuant to 37 C.F.R. § 1.20(a), authorization to charge Deposit Account No. 06-1135 for the prescribed fee for correction of Applicant's error, was given using EFS-Web. The Commissioner is hereby authorized to charge any additional fees which may be required with respect to this communication to Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

Dated: August 14, 2008

/Stephen S. Favakeh/  
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# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,927	06/23/2003	Yasuhito Miyata	78731	8015

22242 7590 12/29/2004

FITCH EVEN TABIN AND FLANNERY  
120 SOUTH LA SALLE STREET  
SUITE 1600  
CHICAGO, IL 60603-3406

EXAMINER

ROSENBERG, LAURA B

ART UNIT PAPER NUMBER

3616

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,927

Applicant(s)

MIYATA, YASUHIITO

Examiner

Laura B Rosenberg

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/23/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. The preliminary amendment filed 22 September 2003, has been entered.

#### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugiura et al. (5,362,101). Sugiura et al. disclose:

- Airbag apparatus (#18) for protecting a rider in the event of front collisions
- Airbag (#26) for being deployed in predetermined directions relative to rider movement due to frontal collisions (best seen in figures 1-12)
- Inflation/direction control means/member (including tethers #36) for restricting inflation in one direction (#X) that is generally aligned with rider movement and allowing inflation in another direction (#W) transverse (generally vertical direction) to the one direction (best seen in figures 1-4)
- Inflator (#34)

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- Airbag has central panel (#26A) and side panels (#26B)
- Connectors (#36A, 36B) attached to central and side panels (column 4, lines 28-37) at rearward position (#36B) and forward position (#36A)
- Tether connections include a generally upper connection (best seen in figures 2, 4, 6) beyond which the airbag extends when inflated (best seen in figures 1-6)
- Forward connection (#36A) comprises a pair of laterally spaced connections (best seen in figures 2, 4, 6)
- Inflation control means increases rigidity in one direction (#X) over rigidity in other direction (#W; best seen in figures 1-4)
- Tethers (#36) extend generally in a fore and aft direction (best seen in figure 2)
- Recess formed in airbag (best seen in figures 1, 3)
- Retainer (#22)
- Airbag inflates in a generally upward direction, maximizing inflation in the upward direction and restricting inflation in a forward and rearward direction (best seen in figures 1, 3, 4)

The phrase "for a motorcycle" leads to the intended use of the airbag apparatus. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, provided that the prior art apparatus is able to be used in the manner set forth by the intended use phrase. In this case, Sugiura et al.'s airbag apparatus is able to be used for a motorcycle.



***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zelenak, Jr. et al., Moriset, Onishi et al., Hawthorn et al., Prescaro et al., MacBrien et al., Dyer et al., and Tokita et al. each disclose an airbag apparatus for protecting a ride in the event of frontal collisions comprising an airbag and inflation control tethers. Chinn et al. disclose an airbag apparatus for a motorcycle for protecting a rider in the event of frontal collisions.

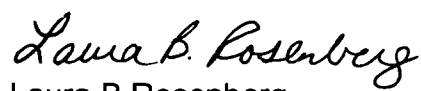
6. Though not considered prior art based on the applicant's filing and priority dates, Kurata et al. and Iijima et al. each disclose an airbag apparatus for a motorcycle for protecting a rider in the event of frontal collisions comprising an airbag and inflation control tethers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B Rosenberg whose telephone number is (703) 305-3135. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Laura B Rosenberg  
Patent Examiner  
Art Unit 3616

LBR

  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600

**Notice of References Cited**Application/Control No.  
10/601,927Applicant(s)/Patent Under  
Reexamination  
MIYATA, YASUHITOExaminer  
Laura B RosenbergArt Unit  
3616

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,022,675	06-1991	Zelenak et al.	280/743.1
	B	US-5,308,113	05-1994	Moriset, Michael A.	280/743.2
	C	US-5,358,273	10-1994	Onishi et al.	280/743.1
	D	US-5,362,101	11-1994	Sugiura et al.	280/743.2
	E	US-5,380,038	01-1995	Hawthorn et al.	280/730.1
	F	US-5,489,119	02-1996	Prescaro et al.	280/743.2
	G	US-5,513,877	05-1996	MacBrien et al.	280/732
	H	US-5,746,447	05-1998	Dyer et al.	280/743.2
	I	US-6,692,023	02-2004	Tokita et al.	280/743.1
	J	US-2004/0007855 A1	01-2004	Kurata et al.	280/729
	K	US-2004/0150197 A1	08-2004	Iijima et al.	280/730.1
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N	GB 2130150 A	05-1984	United Kingdom	CHINN et al.	B60R 21/02
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

PTO/SB/08A Substitute for Form PTO-1449		Application Number		Unassigned	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Filing Date		Herewith	
		First Named Inventor		MIYATA	
		Art Unit		Unassigned	
		Examiner Name		Unassigned	
Sheet	1	of	1	Attorney Docket	78731

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup>			

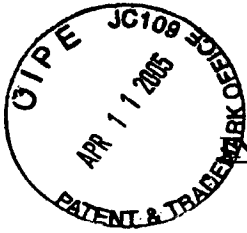
FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup>				
LBR		JP 2001219885	08-14-2001	Toyoda Gosei Co. Ltd.; Yamaha Motor Co. Ltd.		

Examiner Signature	<i>Lama B. Rosenbarg</i>	Date Considered	12-22-04
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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appln No.: 10/601,927

**Confirmation No. 8015**

Filed: June 23, 2003

**CERTIFICATE OF MAILING**

Applicants: Yasuhito MIYATA

Title: AIRBAG APPARATUS,  
MOTORCYCLE WITH  
AIRBAG APPARATUS,  
AND METHOD OF  
MANUFACTURING  
AIRBAG APPARATUS

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date.

Art Unit: 3616

4/7/05  
Date

*St. J. Favakeh*  
Stephen S. Favakeh  
Registration No. 36,798  
Attorney for Applicants

Examiner: Rosenberg, Lisa

Attorney Docket: 78731

Customer No.: 7613

Mail Stop AMENDMENT  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

**AMENDMENT A**

Sir:

In response to the outstanding Office Action mailed December 29, 2004, please amend the above-identified patent application as follows:

**Amendments to the Claims** are reflected in the listing of claims which begin on page 2 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) An airbag apparatus for a motorcycle for protecting a rider in the event of frontal collisions, the airbag apparatus comprising:  
a retainer for the airbag mounted to a lower portion of a motorcycle;  
an airbag for being deployed in a primarily upward, vertical direction  
~~in predetermined directions relative to movement of the rider due to frontal collisions;~~ and

inflation control means spaced upwardly from the retainer for restricting inflation of the airbag in ~~one of the directions~~ in a predetermined direction that is generally aligned with the rider movement due to frontal collisions and allowing inflation of the airbag in ~~another of the directions that is~~ the upward vertical direction transverse to the ~~[[one]]~~ inflation direction aligned with the rider movement.

2. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means comprises tethering means for connecting generally opposing portions of the airbag so as to restrict airbag inflation in the ~~[[one]]~~ direction aligned with the rider movement.

3. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means includes at least one tether that is connected to the airbag at an inflated airbag portion adjacent to the rider and which generally extends away from the rider in the [[one]] direction aligned with the rider movement.

4. (Cancelled)

5. (Currently amended) The airbag apparatus of claim 1 wherein the airbag has a predetermined inflated volume, and  
an inflator sized to inflate the predetermined airbag volume with the inflation control means optimizing the inflated airbag volume extending in the ~~transverse~~ upward direction for maximized rider protection while keeping the size of the inflator to a minimum.

6. (Original) The airbag apparatus of claim 1 wherein the airbag comprises a central panel and side panels, and the inflation control means comprises a connector attached to the central panel at one end and to either the central panel or the side panels at the opposite end thereof.

7. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means increases rigidity of the airbag in the [[one]] direction aligned

with the rider movement over rigidity of the airbag in the ~~[[other]]~~ upward direction.

8. (Original) The airbag apparatus of claim 1 wherein the inflation control means includes a tether in the airbag that extends generally in a fore and aft direction as the airbag is deployed.

9. (Currently amended) The airbag apparatus of claim 1 wherein the inflation control means includes a tether attached to the airbag at generally opposing forward and rearward portions therein so that upon airbag deployment and full inflation thereof a recess is formed in the airbag adjacent the rider.

10. (Original) The airbag apparatus of claim 1 wherein the inflation control means includes a tether or tethers that are connected at predetermined positions in the airbag including generally opposing forward and rearward positions.

11. (Original) The airbag apparatus of claim 10 wherein the rearward position is adjacent the rider and the forward position includes a pair of connections on either side of the airbag toward the forward side thereof.

12. (Original) The airbag apparatus of claim 10 wherein the predetermined positions includes a generally upper position.



13. (Currently amended) An airbag apparatus for a motorcycle having front and rear wheels and a seat for a rider spaced rearward of the front wheel, the airbag apparatus comprises:

a retainer;

an airbag for being deployed from the retainer forwardly of the seat in the event of frontal collisions;

at least one direction control member associated with the airbag to optimize airbag inflation in a predetermined, primary inflation direction; and

a plurality of connections between the control member and the airbag that are at predetermined positions on the airbag spaced from the retainer such that the control member and the connections to the airbag cause the predetermined inflation direction [[is]] to be transverse to generally forward movement of the rider caused by frontal collisions and to minimize time for airbag inflation in the primary inflation direction.

14. (Original) The airbag apparatus of claim 13 wherein the inflated airbag has a rear that is adjacent the rider and a front that is spaced forwardly therefrom, and the plurality of connections include connections that are generally disposed at the front and rear of the airbag to restrict size of the inflated airbag therebetween.

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Amendment dated April 7, 2005  
Reply to Office Action of 12/29/2004

15. (Original) The airbag apparatus of claim 14 wherein the front connection comprises a pair of laterally spaced connections that generally restrict the size of the inflated airbag in a lateral direction.

16. (Original) The airbag apparatus of claim 14 wherein the plurality of connections includes a generally upper connection beyond which the airbag extends when inflated.

17. (Currently amended) The airbag apparatus of claim 13 ~~including a~~ wherein the retainer ~~in which~~ has the airbag ~~[[is]]~~ stowed therein and is positioned to allow the airbag to inflate upwardly and forwardly and rearwardly, and the predetermined positions of the connections between the control member and the airbag cause the predetermined direction to be in a generally upward direction so that size of the inflated airbag is maximized in the upward direction and restricted in a forward and rearward direction.

18. (Original) The airbag apparatus of claim 17 wherein the predetermined positions of the connections restrict size of the inflated airbag in a lateral direction transverse to the upward direction and the forward and rearward direction.

19. (Currently amended) A method for manufacturing an airbag apparatus for a motorcycle, the method comprising:

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providing an airbag and a retainer therefor; [[and]]

connecting at least one direction control member to the airbag spaced from the retainer such that inflation of the airbag is optimized in a predetermined direction for maximizing protection of the rider in the event of front collisions with the motorcycle and so that the control member is not connected to the retainer with the airbag inflated.

20. (Original) The method of claim 19 wherein at least one direction control member is connected to the airbag by connecting generally opposing portions of the airbag with at least one tether so that the tether is extended with airbag inflation and the extended tether restricts inflation size of the airbag between the generally opposing portions.

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Amendment dated April 7, 2005  
Reply to Office Action of 12/29/2004

REMARKS

Claims 1-20 are pending. Claim 4 is cancelled herein. Accordingly claims 1-3 and 5-20 are at issue.

Claims 1-20 are rejected under 35 USC §102(b) as anticipated by Sugiura et al.

The rejection, as it may apply to the claims presented herein, is respectfully traversed.

Claim 1 is directed to an airbag apparatus for a motorcycle. As amended, claim 1 calls for a retainer for the airbag mounted to a lower portion of the motorcycle with the airbag being deployed in a primarily upward, vertical direction. Inflation control means is spaced upwardly from the retainer for restricting inflation of the airbag in a predetermined direction that is generally aligned with the rider movement due to frontal collisions and allowing inflation of the airbag in the upward, vertical direction transverse to the inflation direction aligned with the rider movement. Sugiura et al. do not disclose or suggest the recited arrangement of the retainer and inflation control means as called for in amended claim 1.

Sugiura et al. disclose an airbag device 18 that has a case 22 in which the airbag 26 and inflator 34 are contained with the case disposed behind panel 16 in front of the passenger seat 14 in a passenger compartment of an automobile (FIG. 7). Straps 36 are secured at their ends 36A to sidewall portions 22 of the airbag case 22 and sewn to the airbag at their other ends 36B. The airbag is inflated primarily in a horizontal direction toward the passenger in direction X as indicated in FIG. 2. Accordingly, Sugiura et al. lack a retainer that is mounted to a lower portion of a motorcycle with the airbag being deployed in a primarily upward, vertical direction, as recited in claim 1. In addition, Sugiura et al. lack the recited inflation control means that is spaced upwardly from the retainer. Instead, the corresponding straps

36 of Sugiura et al. are attached to the case 22 and extend therefrom in alignment therewith during airbag inflation. Accordingly, it is believed claim 1, and claims 2, 3, and 5-12 which depend cognately therefrom, are allowable over Sugiura et al.

Many of the dependent claims recite limitations which further delineate over Sugiura et al. For instance, claim 2 calls for the inflation control means to be tethering means that connect generally opposing portions of the airbag to restrict airbag inflation in the direction aligned with the rider movement. Again, Sugiura et al. has their straps attached at one end to the case in each of the embodiments rather than to opposing portions of the airbag for restricting airbag inflation as recited in claim 2. Similarly, claim 6 calls for the inflation control means to be a connector that is attached to airbag panels at either of its ends. No such connector is disclosed or suggested by Sugiura et al. Amended claim 9 calls for the inflation control means to be a tether attached at forward and rearward airbag portions such that upon airbag deployment and full inflation thereof a recess is formed in the airbag adjacent the rider. Sugiura et al. lack the recited tether attached at opposing forward and rearward airbag portions as well as the recited recess formed in the fully inflated airbag. Accordingly, it is believed these claims are allowable for these additional reasons.

Claim 13 is directed to an airbag apparatus for a motorcycle and, as amended, calls for a retainer, and an airbag for being deployed from the retainer forwardly of the motorcycle seat. At least one direction control member is associated with the airbag to optimize airbag inflation in a predetermined, primary inflation direction. A plurality of connections between the control member and the airbag are at predetermined positions on the airbag spaced from the retainer such that the control member and the connections to the airbag cause the predetermined inflation direction to be transverse to generally forward movement of the rider

caused by frontal collisions and to minimize time for full airbag inflation in the primary inflation direction. Sugiura et al. do not disclose or suggest the connections recited in amended claim 13.

More particularly, Sugiura et al. teach connecting the straps 36 at 36A and 36B to achieve upwardly directed inflation of their airbag in direction W. However as previously discussed, connection 36A of the Sugiura et al. airbag is specifically taught to be to the opposing case wall portions 22B. Accordingly, Sugiura et al. lack the recited plurality of the connections on the airbag that are positioned so that it is the control member and the connections to the airbag that cause the predetermined, primary inflation direction to be transverse to the generally forward movement of the rider caused by frontal collisions. In each embodiment of Sugiura et al., without the described connection to the airbag case, the straps and the airbag would not function to cause airbag inflation, as called for in claim 13. In addition, Sugiura et al. are focused on providing two-stage inflation with the straps by way of the provision of folded portions 36C of the straps. This two-stage inflation of the airbag is contrary to the control member and airbag connections as recited in claim 13 which minimize time for full airbag inflation in the primary inflation direction. Accordingly, it is believed claim 13, and claims 14-18 which depend cognately therefrom, are allowable over Sugiura et al.

Claim 19 is directed to a method for manufacturing an airbag apparatus for a motorcycle. As amended, claim 19 calls for providing an airbag and a retainer therefor. The method further recites connecting at least one direction control member to the airbag spaced from the retainer for optimizing inflation of the airbag in a predetermined direction and so that the control member is not connected to the retainer with the airbag inflated. Sugiura et al. do not disclose or suggest the

Application No.10/601,927  
Amendment dated April 7, 2005  
Reply to Office Action of 12/29/2004

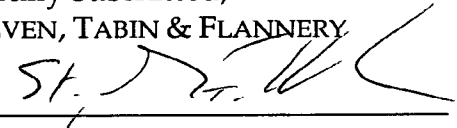
manufacturing method of claim 19 including the manner in which the direction control member is connected to the airbag.

More particularly, Sugiura et al. do not connect the straps to their airbag so that it is spaced from the case. Instead, as previously discussed, the straps of Sugiura et al. are all attached at one end to a case wall. Also, Sugiura et al. do not have straps that are not connected to the retainer with the airbag inflated. When the airbag of Sugiura et al. is inflated such as shown on page 5 and 6, the straps remain connected to the case wall. Accordingly, it is believed claim 19, and claim 20 which depends therefrom, are allowable over Sugiura et al.

Based on the forgoing, reconsideration and allowance of claims 1-3 and 5-20, are respectfully requested.

Respectfully submitted,  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appln No.:	10/601,927	)	
		)	
Filed:	June 23, 2003	)	<b>Confirmation No. 8015</b>
		)	
Applicants:	Yasuhito MIYATA	)	
		)	
Title:	AIRBAG APPARATUS, MOTORCYCLE WITH AIRBAG APPARATUS, AND METHOD OF MANUFACTURING AIRBAG APPARATUS	)	This document was electronically filed using the USPTO's EFS-Web.
		)	
Art Unit:	3616	)	
		)	
Examiner:	Rosenberg, Lisa	)	
		)	
		)	
Attorney Docket:	78731	)	
		)	
Customer No.:	7613	)	

**AMENDMENT**

Mail Stop AMENDMENT  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In response to the outstanding Office Action mailed April 12, 2006, please amend the above-identified patent application as follows:

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 9 of this paper.



AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) An airbag apparatus for a motorcycle for protecting a rider in the event of frontal collisions, the airbag apparatus comprising:  
a retainer for the airbag mounted to the motorcycle;  
an airbag for being deployed in a primarily upward, vertical direction with the inflated airbag having an uppermost end portion spaced upwardly from the retainer; and

an inflation control means device spaced upwardly from the retainer upon airbag inflation for restricting inflation of the airbag in a predetermined fore and aft direction that is generally aligned with rider movement due to frontal collisions and allowing inflation of the airbag in the upward vertical direction with the inflation control ~~means~~ device sized so that size of the inflated airbag in the upward vertical direction is substantially larger than in the predetermined fore and aft direction and being connected to the airbag at at least two positions that are spaced from each other generally along the fore and aft direction and that are at an approximately equal distance from the retainer closer to the airbag upper end portion than to the retainer with the airbag deployed and inflated.

2. (Currently Amended) The airbag apparatus of claim 1 wherein the inflation control ~~means~~ device comprises a tethering means device for connecting

generally opposing portions of the airbag so as to restrict airbag inflation in the fore and aft direction generally aligned with the rider movement.

3. (Currently Amended) The airbag apparatus of claim 1 wherein the inflation control ~~means~~ device includes at least one tether that is connected to the airbag at an inflated airbag portion adjacent to the rider and which generally extends away from the rider in the fore and aft direction generally aligned with the rider movement.

4. (Cancelled)

5. (Currently Amended) The airbag apparatus of claim 1 wherein the airbag has a predetermined inflated volume, and

an inflator sized to inflate the predetermined airbag volume with the inflation control ~~means~~ device optimizing the inflated airbag volume extending in the upward direction for maximized rider protection while keeping the size of the inflator to a minimum.

6. (Currently Amended) The airbag apparatus of claim 1 wherein the airbag comprises a central panel and side panels, and the inflation control ~~means~~ device comprises a connector attached to the central panel at one end and to either the central panel or the side panels at the opposite end thereof.

7. (Currently Amended) The airbag apparatus of claim 1 wherein the inflation control ~~means~~ device increases rigidity of the airbag in the fore and aft direction generally aligned with the rider movement over rigidity of the airbag in the upward direction.

8. (Currently Amended) The airbag apparatus of claim 1 wherein the inflation control ~~means~~ device includes a tether in the airbag that extends generally in the fore and aft direction as the airbag is deployed.

9. (Currently Amended) The airbag apparatus of claim 1 wherein the inflation control ~~means~~ device includes a tether attached to the airbag at generally opposing forward and rearward portions therein so that upon airbag deployment and full inflation thereof a recess is formed in the airbag adjacent the rider.

10. (Currently Amended) The airbag apparatus of claim 1 wherein the inflation control ~~means~~ device includes a tether or tethers that are connected at the predetermined positions in the airbag including generally opposing forward and rearward positions.

11. (Original) The airbag apparatus of claim 10 wherein the rearward position is adjacent the rider and the forward position includes a pair of connections on either side of the airbag toward the forward side thereof.

12. (Original) The airbag apparatus of claim 10 wherein the predetermined positions includes a generally upper position.

13. (Currently Amended) An airbag apparatus for a motorcycle having front and rear wheels and a seat for a rider spaced rearward of the front wheel, the airbag apparatus comprises:

a retainer;

an airbag for being deployed from the retainer forwardly of the seat in the event of frontal collisions;

at least one direction control member ~~associated with~~ arranged in the airbag to optimize airbag inflation in a predetermined, primary inflation direction; and

a plurality of connections between the at least one control member and the airbag that are at predetermined positions on the airbag and spaced from the retainer upon airbag inflation such that the at least one control member and the connections to the airbag restrict inflation of the airbag in a controlled direction that is generally aligned with forward movement of the rider caused by frontal collisions so that size of the inflated airbag is substantially less in the controlled direction than in the primary inflation direction that is transverse to the controlled direction to minimize time for airbag inflation in the primary inflation direction and maximize an area of the airbag that is generally parallel to a front side of the rider wherein the inflated airbag has a rear portion that is adjacent and facing the rider and a front portion that is spaced forwardly therefrom and facing away from the rider, and the plurality of connections include connections that are generally disposed at the front

and rear portions of the airbag to restrict size of the inflated airbag therebetween, and the front and rear connections are spaced from the retainer such that an area between the control member and the retainer is larger than an area between the control member and an end portion of the airbag distal from the retainer in the primary inflation direction.

14. (Cancelled)

15. (Previously Presented) The airbag apparatus of claim 13 wherein the front connection comprises a pair of laterally spaced connections that generally restrict the size of the inflated airbag in a lateral direction.

16. (Previously Presented) The airbag apparatus of claim 13 wherein the plurality of connections includes a generally upper connection beyond which the airbag extends upon inflation.

17. (Previously Presented) The airbag apparatus of claim 13 wherein the retainer has the airbag stowed therein and is positioned to allow the airbag to inflate upwardly and forwardly and rearwardly, and the predetermined positions of the connections between the at least one control member and the airbag cause the primary inflation direction to be in a generally upward direction so that size of the inflated airbag is maximized in the upward direction and restricted in the controlled direction that is a forward and rearward direction.

18. (Original) The airbag apparatus of claim 17 wherein the predetermined positions of the connections restrict size of the inflated airbag in a lateral direction transverse to the upward direction and the forward and rearward direction.

19. (Currently Amended) A method for manufacturing an airbag apparatus for a motorcycle, the method comprising:

providing an airbag and a retainer ~~therefor~~ with the airbag being inflatable in a direction generally away from the retainer toward a distal end portion of the airbag;

connecting a first end of at least one direction control member to the airbag, the first end being spaced by a first predetermined distance from the retainer upon inflation of the airbag such that the first end is closer to the airbag distal end portion than to the retainer; and

connecting a second end of the at least one direction control member to the airbag, the second end being spaced by a second predetermined distance from the retainer upon inflation of the airbag that is approximately equal to the first predetermined distance of the first end from the retainer such that the second end is closer to the airbag distal end portion than to the retainer ~~to maximize protection of the rider in the event of frontal collisions.~~

20. (Previously Presented) The method of claim 19 wherein the at least one direction control member is connected to the airbag by connecting generally opposing portions of the airbag with at least one tether so that the tether is extended

with airbag inflation and the extended tether restricts inflation size of the airbag between the generally opposing portions.

21. (Previously Presented) The method of claim 19 further comprising connecting a third end of the at least one direction control member to the airbag, the third end being spaced a third distance from the retainer that is greater than the predetermined distances of the first and second ends from the retainer.

22. (Previously Presented) The method of claim 19 wherein the at least one direction control member includes a tether having opposite ends comprising the first and second ends so that connecting of the first and second ends of the at least one direction control member to the airbag includes attaching opposite ends of at least one tether to the inside of the airbag.

23. (Previously Presented) The airbag apparatus of claim 13 wherein the at least one direction control member includes a tether having opposite ends attached to the inside of the airbag, and the plurality of connections include a first connection at one of the tether ends and a second connection at the other tether end with the first and second connections being approximately equally spaced from the retainer upon airbag inflation.

24. (New) The airbag apparatus of claim 1 wherein the airbag includes only a single chamber to be inflated.

REMARKS

Claims 1-3, 5-13, and 15-23 are pending. Claim 24 is added herein. Accordingly, claims 1-3, 5-13, and 15-24 are at issue.

Claim 21 stands rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement.

The rejection is respectfully traversed. It is asserted that the subject matter of claim 21, i.e. "a third end of the at least one direction control member spaced a distance greater than the first and second ends from the retainer" is not described in the specification. However, referencing page 11, line 22—page 12, line 3, there the airbag 221 is described as including tethers 227 that not only connect opposing portions of the airbag but also the upper portion of the airbag. As can be seen best in FIG. 11, this includes a tether that extends upwardly and has its end spaced at a greater distance from the retainer than either of the ends of the tether connected to the opposing portions of the airbag.

The drawings are objected to under 37 CFR §1.83(a) as failing to illustrate the subject matter of claim 21.

The rejection is respectfully traversed. As described above, FIG. 11 illustrates the claimed third end of the at least one direction control member spaced a distance greater than the first and second ends from the retainer.

Claims 1-3, 5-13, and 15-23 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,007,090 to Hosono, et al. in view of U.S. Patent No. 5,310,214 to Cuevas.

The rejection, as it may apply to the claims presented herein, is respectfully traversed.

Claim 1 is directed to an airbag apparatus including a retainer and an airbag for being deployed in a primary upward, vertical direction. As amended, claim 1 recites that the inflated airbag has an uppermost end portion spaced upwardly from



the retainer. The inflation control device is spaced upwardly from the retainer and is connected to the airbag at at least two positions that are spaced from each other generally along the fore and aft direction. Claim 1, as amended, further requires that the two positions be at an approximately equal distance from the retainer closer to the airbag upper end portion than to the retainer with the airbag deployed and inflated. None of the relied upon art suggests the inflation control device having connection positions as set forth in amended claim 1.

More particularly, Hosono, et al. disclose an airbag for a motorcycle. However, as acknowledged in the Action, Hosono, et al. do not disclose the claimed inflation control device of claim 1. Rather, Cuevas is relied upon for the teaching of tether straps 86 that are spaced upwardly from the inflator housing 42. However, as can be seen in FIG. 1, the tether straps 86 are connected to the airbag at positions that are much closer to the housing 42 than to the uppermost end portion of the airbag 18. This is the opposite arrangement of the inflation control device recited in amended claim 1, namely having the two positions at which the inflation control device is connected to the airbag be closer to the upper end portion of the airbag than to the retainer. The location of the tether straps, and their connections to the airbag closer to the housing is important for Cuevas as they form the configuration of the inflated airbag such that there is a much larger, convex upper portion 88 for engaging an adult, with a smaller, convex lower portion 90 for engaging a child (see column 3, lines 29-37). Accordingly, it is believed that claim 1 and claims 2, 3, 5-12, and 24 which depend cognately therefrom, are allowable over the relied upon art.

Added claim 24 depends from claim 1 and states the airbag has only a single chamber to be inflated to further distinguish over the dual chamber airbag taught by Cuevas. For this additional reason, claim 24 is believed to be allowable over the relied upon art.

Claim 13 is directed to an airbag apparatus including a retainer and an airbag. As amended, claim 13 calls for the direction control member to be arranged in the airbag to optimize airbag inflation in a primary inflation direction. There are an plurality of connections between the control member and the airbag that are at predetermined positions on the airbag and spaced from the retainer upon airbag inflation. The connections include connections that are at a rear portion of the airbag adjacent and facing the rider and a front portion of the airbag spaced forwardly therefrom and facing away from the rider. Claim 13, as amended, requires that the front and rear connection be spaced from the retainer such that an area between the control member and the retainer is larger than an area between the control member and an end portion of the airbag distal from the retainer in the primary inflation direction. The relied upon art fails to disclose or suggest the recited locations of the front and rear connections of the control member relative to the retainer and the distal end portion of the airbag, as called for in amended claim 13.

More particularly, referencing FIG. 1 of Cuevas, it can be seen that the spacing of the corresponding front and rear connections of the tether strips 86 relative to the housing 42 and the end portion of the airbag 18 distal from the housing is such that the area between the tether straps 86 and the housing 42 is much smaller than that between the tether straps and the distal end portion of the airbag. This is exactly the reverse of the sizing of the airbag relative to the control member connections recited in amended claim 13. Instead of having the area between the tether straps 86 and the distal end portion of the airbag 18 be smaller than the area between the tether straps 86 and the housing 42 as required in amended claim 13, Cuevas has the tether straps 86 connected to the airbag so that the spacing between the straps and the corresponding distal end portion of the airbag is much larger so as to form the convex upper portion 88 for engaging an adult verses the much smaller area between the tether strap 36 and the housing 42 for forming the smaller, convex lower

portion 90 for being engaged by a child. Accordingly, it is believed claim 13, and claims 15-18 and 23 which depend cognately therefrom, are allowable over the relied upon art.

Claim 19 is directed to a method for manufacturing an airbag apparatus for a motorcycle and calls for providing an airbag and a retainer. Claim 19, as amended, calls for the airbag to be inflatable in a direction generally away from the retainer toward a distal end portion of the airbag. Claim 19 further recites connecting a first end of at least one direction control member to the airbag and connecting a second end of the at least one direction control member to the airbag. As amended, claim 19 requires that the first end and the second end be connected to the airbag such that the respective ends are closer to the airbag distal end portion than to the retainer. None of the relied upon art discloses or suggests the method of amended claim 19.

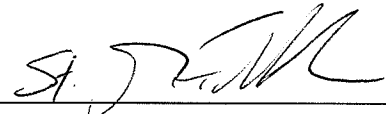
More particularly, Cuevas does not teach connecting a first end of a direction control member to an airbag and a second end of the direction control member to the airbag such that the first and second ends are closer to the airbag distal end portion than to the retainer. As explained with respect to FIG. 1, Cuevas teaches the opposite arrangement whereby Cuevas connects the corresponding ends of the tether straps such that they are closer to the housing 42 than to the distal end portion of the airbag. Cuevas does this to form the airbag 18 to a desired configuration for properly engaging the small child and an adult, as previously discussed. Accordingly, it is believed claim 19, and claims 20-22 which depend cognately therefrom, are allowable over the relied upon art.

Based on the foregoing, reconsideration and allowance of claims 1-3, 5-13, and 15-23, and consideration and allowance of claim 24, are respectfully requested.

Application No. 10/601,927  
Amendment dated July 19, 2006  
Reply to Office Action of April 13, 2006

Respectfully submitted,

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appln No.:	10/601,927	)	
		)	
Filed:	June 23, 2003	)	<b>Confirmation No. 8015</b>
		)	
Applicants:	Yasuhito MIYATA	)	
		)	
Title:	AIRBAG APPARATUS, MOTORCYCLE WITH AIRBAG APPARATUS, AND METHOD OF MANUFACTURING AIRBAG APPARATUS	)	This document was electronically filed using the USPTO's EFS-Web.
		)	
Art Unit:	3616	)	
		)	
Examiner:	Rosenberg, Laura B.	)	
		)	
Attorney Docket:	78731	)	
		)	
Customer No.:	7613	)	

**AMENDMENT**

Mail Stop AMENDMENT  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In response to the outstanding Office Action mailed September 27, 2006,  
please amend the above-identified patent application as follows:

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks/Arguments** begin on page 9 of this paper.

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listing, of claims in the application.

**LISTING OF CLAIMS:**

1. (Currently amended) An airbag apparatus for a motorcycle for protecting a rider in the event of frontal collisions, the airbag apparatus comprising:
  - a retainer for the airbag mounted to the motorcycle;
  - an airbag for being deployed in a primarily upward, vertical direction with the inflated airbag having an uppermost end portion spaced upwardly from the retainer; and
  - an inflation control device generally aligned over and spaced upwardly from the retainer to extend thereover upon airbag inflation for restricting inflation of the airbag in a predetermined fore and aft direction that is generally aligned with rider movement due to frontal collisions and allowing inflation of the airbag in the upward vertical direction with the inflation control device sized so that size of the inflated airbag in the upward vertical direction is substantially larger than in the predetermined fore and aft direction and being connected to the airbag at at least two positions that are spaced from each other generally along the fore and aft direction and that are at an approximately equal distance from the retainer closer to the airbag upper end portion than to the retainer with the airbag deployed and inflated.
2. (Previously presented) The airbag apparatus of claim 1 wherein the inflation control device comprises a tethering device for connecting generally

opposing portions of the airbag so as to restrict airbag inflation in the fore and aft direction generally aligned with the rider movement.

3. (Previously presented) The airbag apparatus of claim 1 wherein the inflation control device includes at least one tether that is connected to the airbag at an inflated airbag portion adjacent to the rider and which generally extends away from the rider in the fore and aft direction generally aligned with the rider movement.

4. (Cancelled)

5. (Previously presented) The airbag apparatus of claim 1 wherein the airbag has a predetermined inflated volume, and  
an inflator sized to inflate the predetermined airbag volume with the inflation control device optimizing the inflated airbag volume extending in the upward direction for maximized rider protection while keeping the size of the inflator to a minimum.

6. (Previously presented) The airbag apparatus of claim 1 wherein the airbag comprises a central panel and side panels, and the inflation control device comprises a connector attached to the central panel at one end and to either the central panel or the side panels at the opposite end thereof.

7. (Previously amended) The airbag apparatus of claim 1 wherein the inflation control device increases rigidity of the airbag in the fore and aft direction generally aligned with the rider movement over rigidity of the airbag in the upward direction.

8. (Previously amended) The airbag apparatus of claim 1 wherein the inflation control device includes a tether in the airbag that extends generally in the fore and aft direction as the airbag is deployed.

9. (Previously presented) The airbag apparatus of claim 1 wherein the inflation control device includes a tether attached to the airbag at generally opposing forward and rearward portions therein so that upon airbag deployment and full inflation thereof a recess is formed in the airbag adjacent the rider.

10. (Previously presented) The airbag apparatus of claim 1 wherein the inflation control device includes a tether or tethers that are connected at the predetermined positions in the airbag including generally opposing forward and rearward positions.

11. (Original) The airbag apparatus of claim 10 wherein the rearward position is adjacent the rider and the forward position includes a pair of connections on either side of the airbag toward the forward side thereof.



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Amendment dated December 27, 2006  
Reply to Office Action of September 27, 2006

12. (Original) The airbag apparatus of claim 10 wherein the predetermined positions includes a generally upper position.

13. (Currently Amended) An airbag apparatus and motorcycle combination comprising:

~~having~~ a body of the motorcycle including front and rear wheels and a seat for a rider spaced rearward of the front wheel; ~~the airbag apparatus comprises:~~

a retainer having front and rear sides;

an airbag for being deployed from the retainer forwardly of the seat in the event of frontal collisions;

at least one direction control member arranged in the airbag to optimize airbag inflation in a predetermined, upward primary inflation direction; and

a plurality of connections between the at least one control member and the airbag that are at predetermined positions on the airbag and spaced from the retainer upon airbag inflation such that the at least one control member and the connections to the airbag restrict inflation of the airbag in a controlled direction that is generally aligned with forward movement of the rider caused by frontal collisions so that size of the inflated airbag is substantially less in the controlled direction than in the upward primary inflation direction that is transverse to the controlled direction to minimize time for airbag inflation in the upward primary inflation direction with the greater size of the inflated airbag in the upward direction restraining the rider during a pitching motion of the motorcycle where the rear wheel rises up with the motorcycle body rotating forwardly during frontal collisions,

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Amendment dated December 27, 2006  
Reply to Office Action of September 27, 2006

~~and maximize an area of the airbag that is generally parallel to a front side of the rider wherein the inflated airbag has a rear portion that is adjacent and facing the rider and a front portion that is spaced forwardly therefrom and facing away from the rider, and the plurality of connections include connections that are generally disposed at the front and rear portions of the airbag to restrict size of the inflated airbag therebetween, and the front and rear connections are spaced from the~~  
corresponding front and rear sides of the retainer such that the front connection and the retainer front side are spaced approximately equal to the spacing between the rear connection and the retainer rear side, and an area between the control member and the retainer is larger than an area between the control member and an end portion of the airbag distal from the retainer in the primary inflation direction.

14. (Cancelled)

15. (Currently amended) An airbag apparatus for a motorcycle having front and rear wheels and a seat for a rider spaced rearward of the front wheel, the airbag apparatus comprises:

a retainer;

an airbag for being deployed from the retainer forwardly of the seat in the event of frontal collisions;

at least one direction control member arranged in the airbag to optimize airbag inflation in a predetermined, primary inflation direction; and

a plurality of connections between the at least one control member and the airbag that are at predetermined positions on the airbag and spaced from the

Application No. 10/601,927  
Amendment dated December 27, 2006  
Reply to Office Action of September 27, 2006

retainer upon airbag inflation such that the at least one control member and the connections to the airbag restrict inflation of the airbag in a controlled direction that is generally aligned with forward movement of the rider caused by frontal collisions so that size of the inflated airbag is substantially less in the controlled direction than in the primary inflation direction that is transverse to the controlled direction to minimize time for airbag inflation in the primary inflation direction and maximize an area of the airbag that is generally parallel to a front side of the rider wherein the inflated airbag has a rear portion that is adjacent and facing the rider and a front portion that is spaced forwardly therefrom and facing away from the rider, and the plurality of connections include connections that are generally disposed at the front and rear portions of the airbag to restrict size of the inflated airbag therebetween, and the front and rear connections are spaced from the retainer such that an area between the control member and the retainer is larger than an area between the control member and an end portion of the airbag distal from the retainer in the primary inflation direction,

~~The airbag apparatus of claim 13~~ wherein the front connection comprises a pair of laterally spaced connections that generally restrict the size of the inflated airbag in a lateral direction.

16. (Currently amended) ~~The airbag apparatus~~ combination of claim 13 wherein the plurality of connections includes a generally upper connection beyond which the airbag extends upon inflation.

17. (Currently amended) The ~~airbag apparatus~~ combination of claim 13 wherein the retainer has the airbag stowed therein and is positioned to allow the airbag to inflate upwardly and forwardly and rearwardly, and the predetermined positions of the connections between the at least one control member and the airbag cause the primary inflation direction to be in a generally upward direction so that size of the inflated airbag is maximized in the upward direction and restricted in the controlled direction that is a forward and rearward direction.

18. (Currently amended) The ~~airbag apparatus~~ combination of claim 17 wherein the predetermined positions of the connections restrict size of the inflated airbag in a lateral direction transverse to the upward direction and the forward and rearward direction.

19. (Currently Amended) A method for manufacturing an airbag apparatus for a motorcycle, the method comprising:

- providing an airbag and a retainer with the airbag being inflatable in a direction generally away from the retainer toward a distal end portion of the airbag;
- connecting a first end of at least one direction control member to the airbag, the first end being spaced by a first predetermined distance from the retainer upon inflation of the airbag such that the first end is closer to the airbag distal end portion than to the retainer; ~~and~~
- connecting a second end of the at least one direction control member to the airbag, the second end being spaced by a second predetermined distance from the retainer upon inflation of the airbag that is approximately equal to the first

predetermined distance of the first end from the retainer such that the second end is closer to the airbag distal end portion than to the retainer;

mounting the retainer with the airbag therein to the motorcycle so that upon airbag inflation, the inflated airbag distal end portion is positioned for restraining a rider of the motorcycle during a pitching motion thereof.

20. (Previously Presented) The method of claim 19 wherein the at least one direction control member is connected to the airbag by connecting generally opposing portions of the airbag with at least one tether so that the tether is extended with airbag inflation and the extended tether restricts inflation size of the airbag between the generally opposing portions.

21. (Previously Presented) The method of claim 19 further comprising connecting a third end of the at least one direction control member to the airbag, the third end being spaced a third distance from the retainer that is greater than the predetermined distances of the first and second ends from the retainer.

22. (Previously Presented) The method of claim 19 wherein the at least one direction control member includes a tether having opposite ends comprising the first and second ends so that connecting of the first and second ends of the at least one direction control member to the airbag includes attaching opposite ends of at least one tether to the inside of the airbag.

23. (Cancelled)

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24. (Added) The airbag apparatus of claim 1 wherein the airbag includes only a single chamber to be inflated.

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REMARKS

Claims 1-3, 5-13 and 15-24 are pending. Claim 23 is cancelled herein. Accordingly, claims 1-3, 5-13, 15-22 and 24 are at issue.

Initially, the indication that claim 15 recites allowable subject matter is noted with appreciation. Accordingly, claim 15 is rewritten in independent form to recite the limitations of its base claim 13 so that claim 15 should now be in condition for allowance.

Claims 1-3, 5-13, and 16-24 stand rejected under 35 USC §103(a) as unpatentable over U.S. Patent No. 6,007,090 to Hosono, et al. in view of U.S. Patent No. 6,832,780 to Amamori.

The rejection, as it may apply to the claims presented herein, is respectfully traversed.

Claim 1 is directed to an airbag apparatus for a motorcycle and calls for a retainer, and an airbag for being deployed in a primarily upward, vertical direction. As amended, claim 1 recites an inflation control device that is generally aligned over and spaced upwardly from the retainer to extend thereover for restricting inflation of the airbag in a predetermined fore and aft direction that is generally aligned with rider movement due to frontal collisions and allowing inflation of the airbag in the upward vertical direction. The inflation control device is sized so that size of the inflated airbag in the upward vertical direction is substantially larger than in the predetermined fore and aft direction. The inflation control device is connected to the airbag at least two positions that are spaced from each other generally along the fore and aft direction and that are at an approximately equal distance from the retainer closer to the airbag upper end portion than to the retainer with the airbag deployed and inflated. None of the relied upon art discloses or suggests the arrangement of an inflation control device as called for in claim 1.

As mentioned in the Action, the motorcycle airbag of Hosono, et al. does not include an inflation control device for restricting inflation of the motorcycle airbag. For this Amamori is relied upon. However, Amamori discloses a passenger seat airbag 1 for use in a passenger compartment of an automobile. In this regard, Amamori teaches that the airbag 1 is inflated toward the occupant as well as up toward the windshield 22. As can be seen in FIG. 1, the internal member 6 in the Amamori airbag 1 is not aligned over the retainer 10 to extend thereover, as required in amended claim 1. Instead, in Amamori, the internal member 6 is offset toward the occupant side from the retainer 10 in the airbag. Further, FIG. 1 of Amamori shows that the size of the inflated airbag is not substantially larger in the upward vertical direction than in the fore and aft direction. In fact, the Amamori airbag actually larger in the fore and aft direction than in the upward, vertical direction. In addition, Amamori does not have connections of the internal member 6 that are spaced from each other in the fore and aft direction and that are at an approximately equal distance from the retainer. Instead, the internal member 6 has a forward connection at the windshield facing surface 4 of the airbag that is closer to the retainer than the rear connection of the internal member 6 to the occupant facing surface 2 of the airbag. Accordingly, it is believed that claim 1, and claims 2, 3, 5-12, and 24 which depend cognately therefrom, are allowable over the relied upon references.

Claim 13 is amended to call for an airbag apparatus and motorcycle combination that includes a body of the motorcycle having front and rear wheels and a seat for a rider spaced rearward of the front wheel. A retainer has front and rear sides, and an airbag is deployed from the retainer forwardly of the seat in the event of front collisions. At least one direction control member is arranged in the airbag to optimize airbag inflation in a predetermined, upward primary inflation direction. Claim 13 further calls for a plurality of connections between the control



member and the airbag at predetermined positions on the airbag and spaced from the retainer which restrict inflation of the airbag in a controlled direction generally aligned with forward movement of the rider caused by frontal collisions so that size of the inflated airbag is substantially less in the controlled direction than in the upward, primary inflation direction that is transverse to the controlled direction. As amended, claim 13 states that the greater size of the inflated airbag in the upward direction restrains the rider during a pitching motion of the motorcycle where the rear wheel rises up with the motorcycle body rotating forwardly during frontal collisions. Amended claim 13 further recites that there are connections of the at least one control member that are generally disposed at the front and rear portions of the airbag and are spaced from the corresponding front and rear sides of the retainer such that the front connection and the retainer front side are spaced approximately equal to the spacing between the rear connection and the retainer rear side. None of the cited art discloses or suggests the arrangement of connections of a direction control member as recited in amended claim 13.

As previously mentioned, Hosono, et al. teach a motorcycle airbag but otherwise do not disclose a direction control member as recited in claim 13. Further, the airbag of Hosono, et al. is sized so that it would not be suitable for restraining a rider during a pitching motion of the motorcycle. The Amamori airbag does not have connections of a control member, as recited in amended claim 13. More particularly, the primary inflation direction of the Amamori airbag is not in an upward, vertical direction since the airbag actually is inflated to extend further in the fore and aft direction than in the vertical direction. In this regard, the size of the inflated airbag 1 of Amamori is not substantially less in the corresponding controlled direction aligned with forward movement of the rider than in the upward, primary inflation direction. Instead, the Amamori airbag extends toward the occupant and is larger in this fore and aft direction than it is in the upward, vertical direction when

inflated. With respect to the location of the connections of the internal member 6 relative to the corresponding front and rear sides of the retainer 10, FIG. 1 shows that the distance between the front connection at the windshield facing surface 4 and the corresponding front side of the retainer 10 is closer than the distance between the rear connection at the occupant facing surface 2 and the corresponding rear side of the retainer 10. This is in contrast to the front and rear connections that are approximately equally spaced from the corresponding front and rear sides of the retainer, as called for in amended claim 13. Accordingly, it is believed that claim 13, and claims 16-18 which depend therefrom, are allowable over the relied upon references.

Claim 19 is directed to a method for manufacturing an airbag apparatus for a motorcycle. Claim 19 calls for connecting a first end of a direction control member to the airbag with the first end being spaced by a first predetermined distance from the retainer upon inflation of the airbag, and connecting a second end of the direction control member to the airbag with the second end being spaced by a second predetermined distance from the retainer upon inflation of the airbag that is approximately equal to the first predetermined distance of the first end from the retainer. Claim 19, as amended, further recites mounting the retainer with the airbag therein to the motorcycle so that upon airbag inflation, the inflated airbag distal end portion is positioned for restraining a rider of the motorcycle during a pitching motion thereof.

Hosono, et al. fail to disclose the steps of connecting first and second ends of a direction control member to an airbag as recited in amended claim 19. Further, Hosono, et al. do not disclose mounting the retainer with the airbag therein so that upon inflation the distal end portion of the airbag is positioned for restraining a rider of the motorcycle during a pitching motion thereof. In the Amamori airbag, the ends of the internal member 6 are not connected to the airbag so as to be

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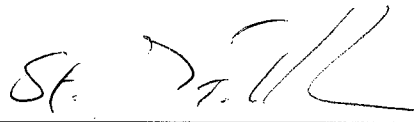
approximately equally spaced from the retainer, as required in amended claim 19. As the Amamori airbag is mounted in an automobile passenger compartment, Amamori does not disclose or suggest mounting a retainer with an airbag therein to a motorcycle, as called for in amended claim 19. Accordingly, it is believed that claim 19, and claims 21 and 22 which depend therefrom, are allowable over the relied upon references.

Based on the foregoing, reconsideration and allowance of claims 1-3, 5-13, 15-22, and 24, are respectfully requested.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

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Dated: December 27, 2006

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